Management of Technology for Education- EDUC- 8813

Project Proposal

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**Description of Project**

**It is the goal of the Lawrenceville Elementary Technology Committee to purchase a classroom set of wireless laptop netbooks, printer, and cart for the elementary school to share with all grade levels. To accomplish this task the technology committee will work with a business partner and apply for a grant. The committee has identified the** [Best Buy te@ch Program as the funding agency,](http://communications.bestbuy.com/communityrelations/teach.asp) because this program rewards schools who make learning fun by integrating interactive technology into the curriculum. The te@ch program awards a $2,500- $10,000 Best Buy Gift Card to selected schools.

**Need Statement**

**A local Title-one elementary school is in need of an additional computer lab for the 988 students who attend Lawrenceville Elementary. Presently the school has two labs; an** **IBM lab and a Mac Lab. The IBM lab houses 30 desktop computers equipped with Pentium 4 processors, sound cards, speakers, and microphones; they run off a Microsoft Windows XP operating system. These networked computers use both a LAN and WAN network and are connected to the Internet via a T- 1 line.**   
  
**The Mac Lab consists of Apple Computers which do not have Internet connection due to their limited features and slow processor speed of these older computers. Stand alone software lab packs have been installed on the computers; students use drill and practice learning sessions in this technologically obsolete lab.**  
  
The school’s classroom t**eachers have requested additional computers to provide constructivist learning opportunities for the students to enhance reading, writing, and math skills; these areas reflect the school’s local school plan for improvement. In support of the classroom teacher’s request, the technology committee would like to purchase a classroom set of Dell wireless computer laptop netbooks, printer, and rolling cart for student use; this mobile lab will be shared by all grade levels for hands on activities and lessons. The teachers state that additional technology usage is needed to comply with the No Child Left Behind requirement that all students be technology literate by the end of the eight grade.**

**Since many of the Lawrenceville students do not have access to home computers, it is imperative that students are provided the ability to use computers in school. 62 percent of the elementary students participate in the Free and Reduced Lunch Program.**

**Test score results show between 19%- 34% of the students do not meet adequate mastery of the state’s curriculum. Teachers plan to use additional constructivist activities to motivate and to improve skills and test scores of students. Lessons, which align with the state and county curriculums have been created to enhance student learning of subject material and to demonstrate their knowledge through these hands-on outcomes. Two lessons are listed below:**

***Example One***

After completing vocabulary and workbook skill building knowledge, students will use the netbook to complete a writing sample dependent upon a school subject area they are studying. Students will then share this written essay with a partner for corrections. Once corrections have been completed, students will print the rough draft for the teacher to grade. Once graded, the student will then improve on the written essay. Since the student is using a word processor to type the lesson the student is more inclined to make proper corrections, thereby improve writing skills, since they do not have to rewrite the entire essay. This format allows for more words to be written and motivationally improves quality of work. Creativity in writing is greatly enhanced by working with a partner, adding pictures to the essay, and spending more time constructing language then rewriting essays.

*Example Two*

Using the school’s outdoor garden and fish pond, students will create a table tracking plant growth, fish totals, colors, look, and size of plants, fish, and insects. Tape measures will be used to take measurements that demonstrate growth patterns and digital cameras will be used to take photos of plants, fish, and insects. Using the information obtained, students will compare their notes with other group members to demonstrate information obtained is correct. Analysis and evaluation will take place inside the classroom and a journal will be kept to hypothesize information. This information can be shared through a wiki page with other local, county, state, or country classrooms to further motivate student’s outcomes of this lesson.

In keeping with the Title I concern of engaging parents to participate with their child’s education, students will be allowed to present their findings through Technology “Knight” or at school PTA meetings. Additionally, a web page will be student created to share information on the school’s website. Through the use of this lesson, students demonstrate a working knowledge of reading, writing, math, science, and social study skills by linking classroom learning to real world situations which are studied to enhance ecological conditions.

**Mission Statement**

**The mission of the Lawrenceville Elementary Technology Committee is to enhance and engage student learning through hands-on opportunities by using the latest technological frameworks to improve student learning for all children. Methods for collaboration will commonly take place to promote high-end thinking, problem-solving, and discovery in all subject areas with an emphasis in reading, writing, and mathematical skills.**

**The Mechanics**

**Networking Topology, Security, Application and OS Platform Considerations**

The Servers will be located in administration to provide an active directory database with the Server 2003 (Network Operating System) NOS to provide dynamic IP address configuration and firewall protection.

The client operating system (Windows XP) and curriculum-based application programs will be loaded from an ISO image file with the site licenses and antivirus installed on each computer. A photo image with the school logo as wallpaper will be configured on the desktops to identify the computers as school property and maintain uniformity to troubleshoot any configuration issues.

A classroom management system installed so that the instructor can view all activities in classroom and physically controls all students’ laptop activity from the instructor’s computer. (Example: Lanschool)

All wireless access points (approx. 5 ) will be strategically placed in the building so that they will overlap in area coverage. They will provide 802.11b/g frequency and bandwidth of 54Mbps at a range of 100 meters radius.

The wirelesses SSID (Set Subscriber Identification) will reflect the school domain.

A WPA network key will be implemented for security purposes as a hot spot for wireless connectivity.

The DNS will be configured through OPEN DNS to filter unwanted web sites and monitor network activity.

The printer will be mapped to selected instructor’s computer to manage printing and to centrally address any printer configuration issues.

Password policies and procedures will be implemented by the administration as needed.

Storage on carts will require a lock and a battery charging system for laptops when not in use.

**Timeline for Grant Proposal**

Our project will implement technology that is utilized in mainstream learning environments throughout the K-12 curriculum, as well as prepare our students for the higher education standards they will be interacting with in the future. The committee will apply for the Best Buy Te@ch Program grant which focuses on purchasing technology equipment; 1,350 schools are given grants ranging in amounts from $2,000- $10,000 awards with a chance to win a $100,000 award.

Our school will implement the recent distribution of Microsoft Operating System Supported Platform Windows XP, Open DNS (an open source free Internet security feature) and Norton Antivirus software to ensure security and control of the learning environment.

***Planning Phase: 9/1/2009 - 4/1/2010***

We identify our goal and our collaboration objectives to assess the curriculum and the need for technology. We have seen the only risk is to let our student’s not realize the standards of preparing for an academic future in innovation.

We have discussed among the stakeholders of our institution and community to ascertain that a planning phase of 7 months prior to this proposal has been met to decide upon the needs of our proposal. The consensus has delegated duties to the following committees:

\* Research committee: ascertain the budget and sources for the equipment and services

requested in the proposal.

\* Technology Committee: develop a topology outlay for a school wide server-client architecture that can monitor and coordinate with a local Internet Service Provider (ISP) and investigate the software management tools that are practical and user-friendly. Training for the instructors and staff will take place with regard to the technology being utilized by the students and faculty.

\* Grant writing committee: Follow-up with the interview process, review grant proposal and compliance guidelines for submission.

***Review Deadline: 4/15/2010***

Our sponsors have set criteria for submission as April 30th, 2010; we must be in compliance in order to implement the technology into our school curriculum by the summer term. This will allow our faculty and staff to learn how to manage the enhanced learning environment. April 15th will be the deadline for our initial submission to our review committee for appraisal and any necessary refinements.

***Submission Deadline: 4/28/2010***

The initial submission by e-mail and registered mail and/or fax to the administration and sponsor with a follow-up confirmation by the Grant writing committee will take place prior to April 30th.

***Response to Proposal Deadline: 4/30/2010 - 5/14/2010***

The response is anytime from one week after submission if immediately approved or rejected. Should further consideration be necessary by the intended sponsors it may take up to two weeks for a confirmation of approval.

***Acceptance of payment Deadline: 5/21/2010***

Purchase of equipment, extended warranties, ISP service contracts and appropriate site licenses for software so that we will be able to acquire, install, configure and troubleshoot the various hardware and software components.

***Implementation Deadline: 5/30/2009 – 6/30/2010***

Training instruction for staff and faculty by select technology committee members to prepare the faculty and staff to implement the technology of hardware and software into lesson plans to supplement a blended learning if instructional design.

Troubleshooting or returning malfunctioning equipment and verifying shipping orders are complete and accurate.

Demark configuration with the ISP router modem interface.

Site Licenses for Norton Antivirus: Supplied by the ISP, Open DNS is Free

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| --- | --- | --- | --- | --- | --- | --- |
| **Timeline for grant proposal** | 2009-present | 4/15/2010 | 4/28/2010  4/30/2010 | 4/30/2010  5/14/2010 | 5/21/2010 | 5/30/2010  6/30/2010 |
| **Planning phase** | /////// | // |  |  |  |  |
| **Review phase** |  | ///////// | // |  |  |  |
| **Submission phase** |  |  | ////////// |  |  |  |
| **Response phase** |  |  |  | ////////// |  |  |
| **Acceptance phase** |  |  |  |  | ////////// |  |
| **Implementation phase** |  |  |  |  |  | ////////// |

**Supplemental Funds**

Through our business partner, Wages and Sons Funeral Home, supplemental funds have been provided to purchase two digital cameras, ink, and paper which will support classroom supply needs. Additionally, Mr. Wages has agreed to provide additionally funding for technology items not supported by the grant; this offer does not include teacher professional development training. Staff development sessions will occur through Learning Thursday’s, which are technology lessons set-up by the Local School Technology Coordinator

**Budget**

The Lawrenceville Elementary Technology committee has been asked by the teachers of the school to provide a wireless cart housed with 30 netbook computers (Appendix B), which will be used for all subject areas of the school. To achieve this goal the committee has decided to apply for the Best Buy Te@ch Program Grant which supports schools in purchasing technology equipment. At this time the committee has received a $5,000 business partner donation from Wages and Sons Funeral Home to assist in the purchasing of a wireless lab and supplies which will be used by all students in the school. It is the committee’s plan to implement this wireless system (Appendix C), during the final months of the 2010 school year.

***Infrastructure***

Gwinnett County leads many school systems in the state of Georgia with their technological development toward student learning. With the support of the Title II-D of the No Child Left Behind Act of 2001 the elementary school has already received funds for implementing wireless Internet access points in the school; there is no need for additional hotspots to be connected at this time. All classrooms are able to receive wireless Internet.

***Hardware***

* 30 Dell Netbook computers (Appendices A)
* Wireless cart
* Wireless printer
* Tie down strap for printer
* LCD projector (if funding is available through the grant)

***Software***

*Requires purchase*

* Each netbook comes equipped with Ubantu® operating system by Linux

*Software already owned by the school district*

* ISO image file with the site licenses and antivirus software
* Classroom management system; i.e. Lanschool
* The wireless SSID (Set Subscriber Identification) will reflect the school domain.
* A WPA network key will be implemented for security purposes
* DNS Filter

***Professional Development***

Teachers and staff will be trained by the Local School Technology Coordinator regarding the use of the netbook laptops. A specifically trained para-pro will be used, if grant money is available, to assist teachers and students with the implementation of the wireless cart.

***Upkeep and Upgrades***

At this time there are no anticipated upgrades to speed. However, as part of the school’s local technology plan, a budget line will be implemented for a future upgrade. Supplemental funds will be used for upkeep of this wireless system.

***Direct Costs*** (if funding is available through the grant)

A para-pro will be used to assist teachers with the wireless lab for the first year only. It is believed that teachers will not require the use of an aid after teachers and students learn to use the equipment. Additionally, the school’s LSTC can assist with any needs that arise.

|  |  |  |
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| **Budget Purpose:** | ***General Operating Support:***  The Lawrenceville Elementary Technology Committee will provide a wireless cart housed with 30 notebook computers, which will be used for all subject areas of the school. | ***Project Support :***  To achieve this goal we have applied for the Best Buy Te@ch Program Grant, which supports schools in purchasing technology equipment. Additional funds have been secured through our partnership with Wages and Sons Funeral Home. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **I. Income** | | **II. Expense** | | |
| **Sources** | **Amt** | | **Uses** | **Amt** |
| **Revenue** |  | | **Support** |  |
| Grants | 6,700.00 | | Printer | $179.00 |
| Donations | 5,000.00 | | Projector | $499.00 |
|  |  | | Software and warranties  (support county license) | $2,090.00 |
|  |  | | Cart and Tie Down strap | $1,625.00 |
|  |  | | Printing Supplies, projector bulbs, and remote control | $306.00 |
|  |  | | Laptop computers | $6,000.00 |
| Total | 11,700.00 | | Total | $11,700.00 |

**Appendices**

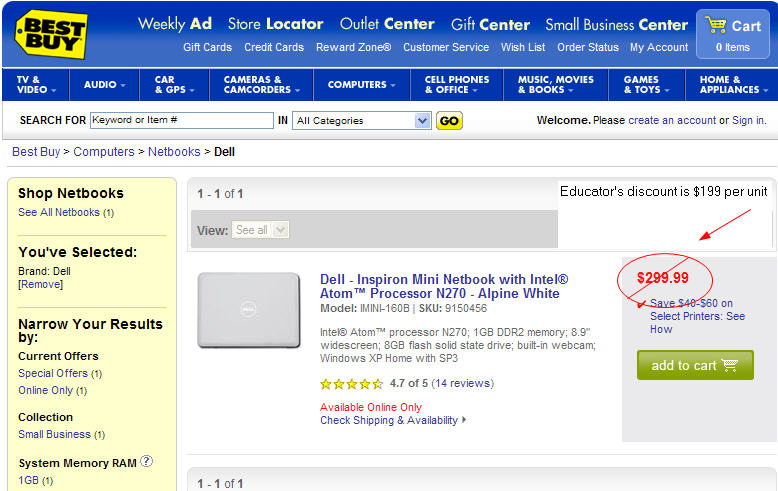
***Appendices A***

**Dell Netbook Description- $199 per unit includes an educator’s discount**

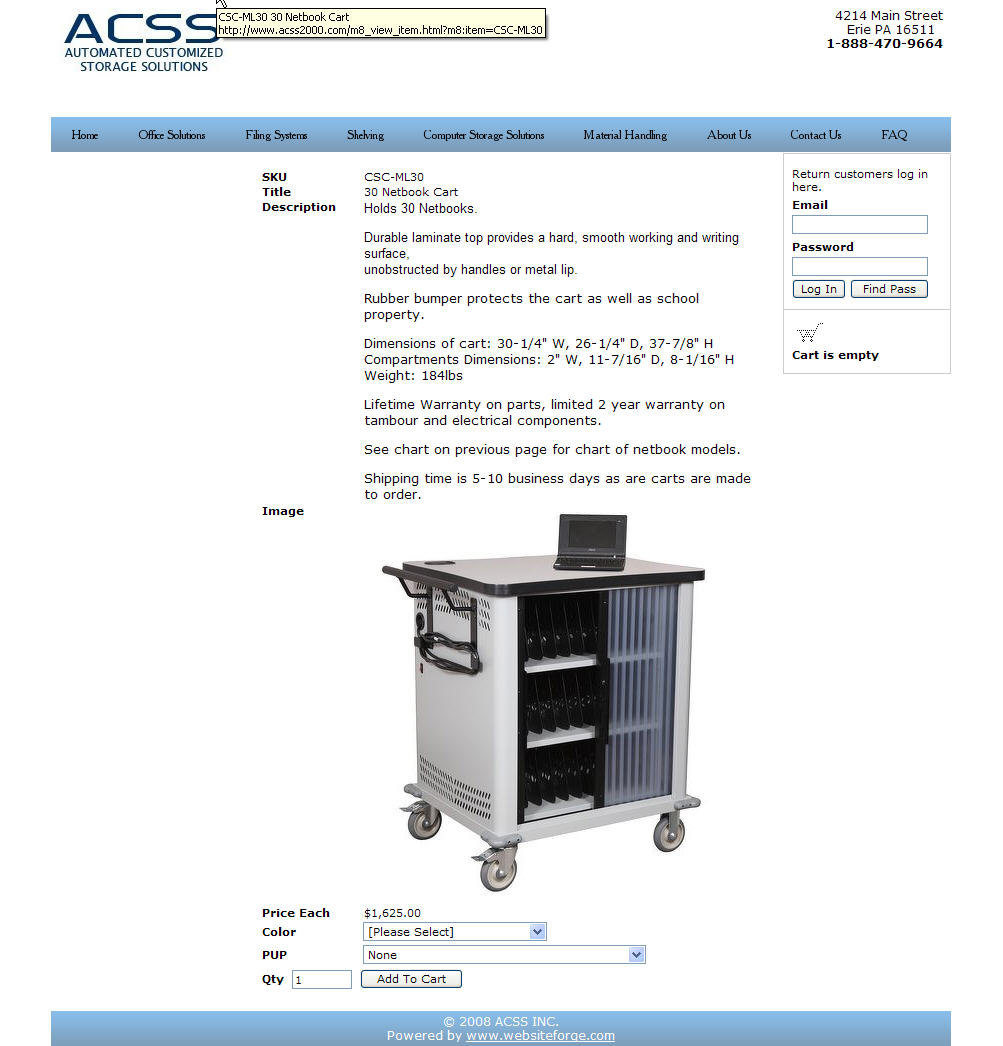
* Inspiron 910 Intel Atom processor N270, 1.6 GHz, 533 Mhz, 512 K L2Cache
* Obsidian Black Color with Gloss Finish
* 1GB, DDR2,533Mhz, 1 DIMM
* 8.9 inch Wide Screen WSVGA TL
* Intel Graphics Media Accelerator (GMA) 950
* 4 GB Solid State Drive (mini-card Module/PATA)
* Mini OS powered by Ubuntu 8.04.1
* Base LCD Assembly
* Wireless 802.11g Mini Card
* 32 WHr 4-cell battery
* 1 year warranty, parts, service, and tech support
* Inspiron 910 Intel Atom processor N270, 1.6 GHz, 533 Mhz, 512 K L2Cache
* Obsidian Black Color with Gloss Finish
* 1GB, DDR2,533Mhz, 1 DIMM
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* 4 GB Solid State Drive (mini-card Module/PATA)
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* Wireless 802.11g Mini Card
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* 1 year warranty, parts, service, and tech support

**Appendices B**

**Dell Mini-9 Netbook**



**Wireless Cart**



**Printer Information**

